



***AMPLIFIER INSTALLATION manual***



Thank you for purchasing this Momentum Amplifier.

Please read this manual carefully before beginning your installation. Should you need technical assistance during or after your installation, please call our technical hot-line at 732 370 5400 between 10:00 AM and 5:00PM EST.

**WARNING:** Use of this amplifier at extreme high volumes for extended periods of time may cause hearing loss and or hearing damage. During periods of prolonged high volume levels it is recommended that you use ear safety devices. Playing Momentum amplifiers at high volume levels while driving will impair your ability to hear necessary traffic sounds. While driving always keep your sound volume at reasonable volume levels.

When installing the amplifier secure it tightly. An amplifier not mounted or not mounted tightly can cause serious injury to passengers and your vehicle if set in motion by an abrupt driving maneuver or short stop.

#### FEATURES

- Sleek Chrome Plated Amplifier Chassis.
- Induction Vent Cooling System.
- Lucite Viewing Window with Interior Cool-Blue Lighting.
- Fully Independent High Performance MosFET Power Supply.
- High Capacity BiPolar Output Transistors.
- Fully Adjustable Built-in Electronic Crossover System.
- Independent/Variable High Pass and Low Pass 12dB Crossover Adjustment.
- + 12dB Bass Boost Circuit.
- High Level OEM Speaker Input Port.
- Soft Start Mute & Delay Turn On Circuitry.
- 2 Ohm Stereo/4 Ohm Mono Capable.



## INSTALLATION DIRECTIONS

The power connections can accept 8 to 10 gauge wire. Be sure to strip just enough wire that fits into the terminal without exposing excess copper. This will protect against shorts from exposed wires which may touch.

### POWER/GROUND/REMOTE WIRING

Connect the amplifier 12V+ connection directly to your car battery using at least 10 gauge primary wire. You should install a secondary in-line fuse in the primary wire near the battery connection.

Connect a second wire of equal gauge to the ground connection of the amp and secure it to a welded chassis member of the car.

Connect a third wire to the Remote connection of the amp directly to the head unit amp turn-on wire or radio power antenna lead. This will control that the amplifier turns on when the radio is on.

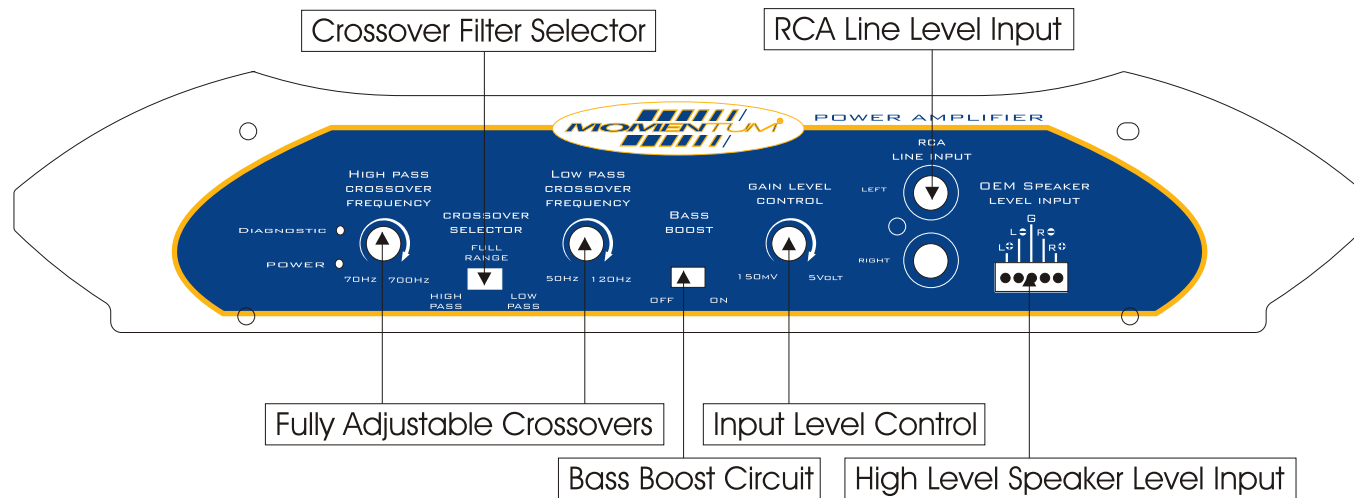
Momentum amplifiers feature very sophisticated protection circuits. Should the amplifier reach an unstable operating temperature greater than 80 degrees C it will shut down. Allow the amp to cool sufficiently before restarting the system. In some instances the Logic control of the power supply will not shut down the amplifier completely but will spurt the amp on and off. Turn off your system and allow it to cool before restarting again. If you live in a hot climate, you may want to consider installing a cooling fan in your system.

Should the amplifier encounter a speaker short circuit, it will go into the Diagnostic mode and shut down. The Diagnostic LED will light on the side panel. Turn off your system and disconnect all the speakers from the amplifier. Turn the system on, make sure the diagnostic LED is not on and begin wiring your speakers back to the amp one at a time. The speaker which causes the amp to go back into Diagnostic is the speaker with the short. Disconnect this speaker again before restarting the system.

Other protection circuits include Input Overload, Reverse Polarity and DC Offset protection.



## TWO CHANNEL AMPLIFIER INPUT CONFIGURATION



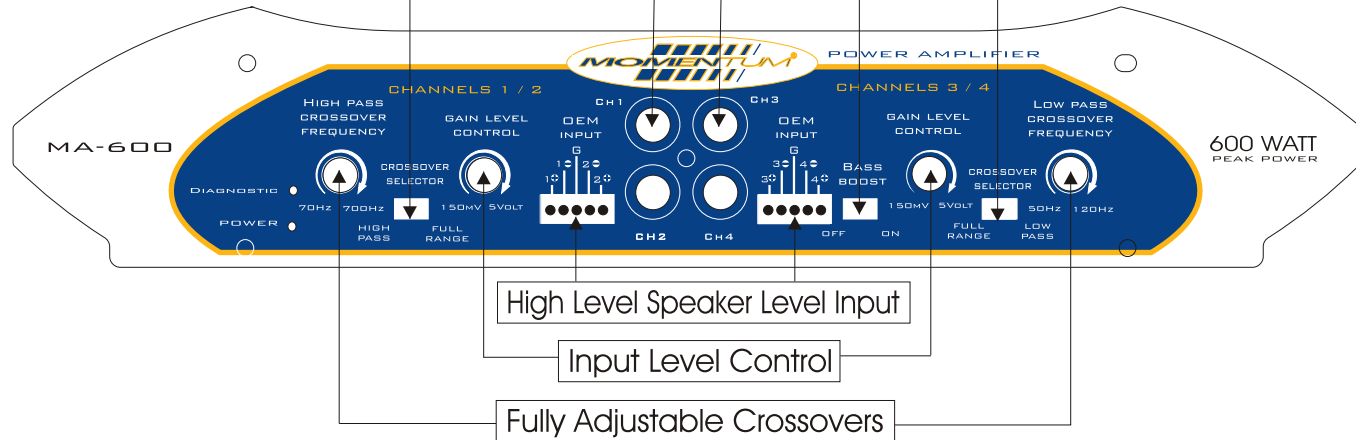


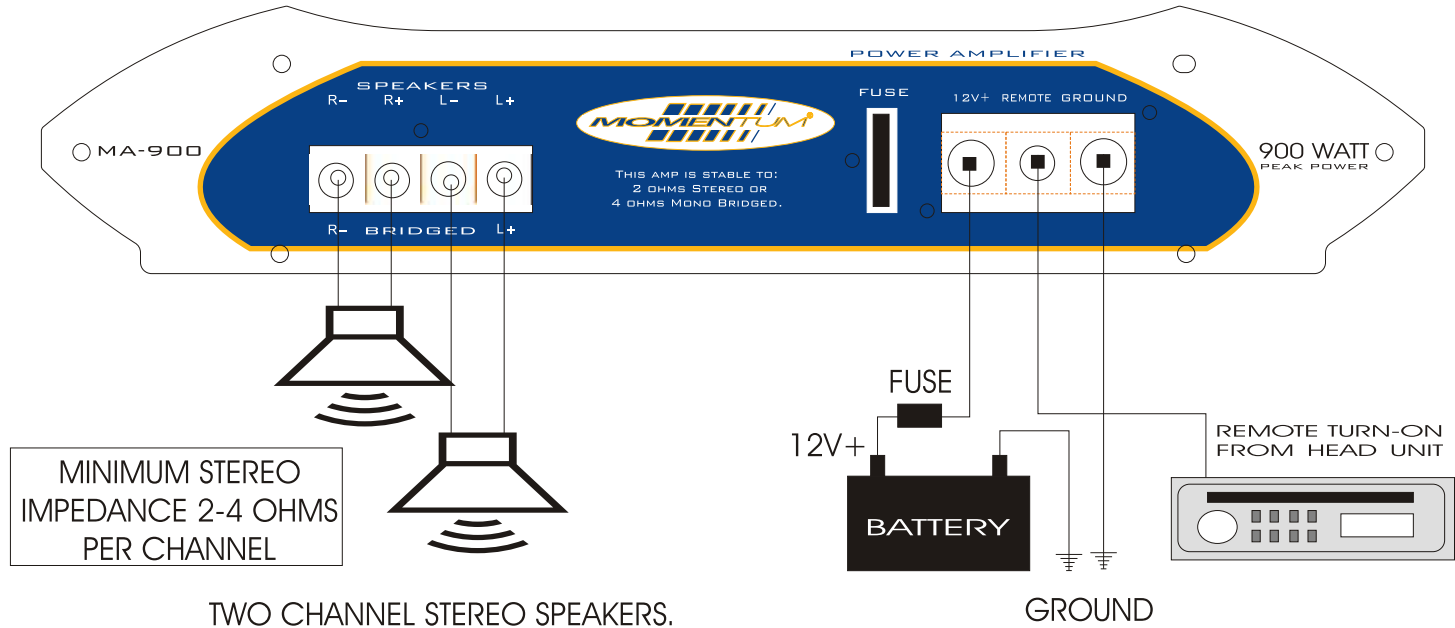
FOUR CHANNEL AMPLIFIER  
INPUT CONFIGURATION

Bass Boost Circuit

Crossover Filter Selector

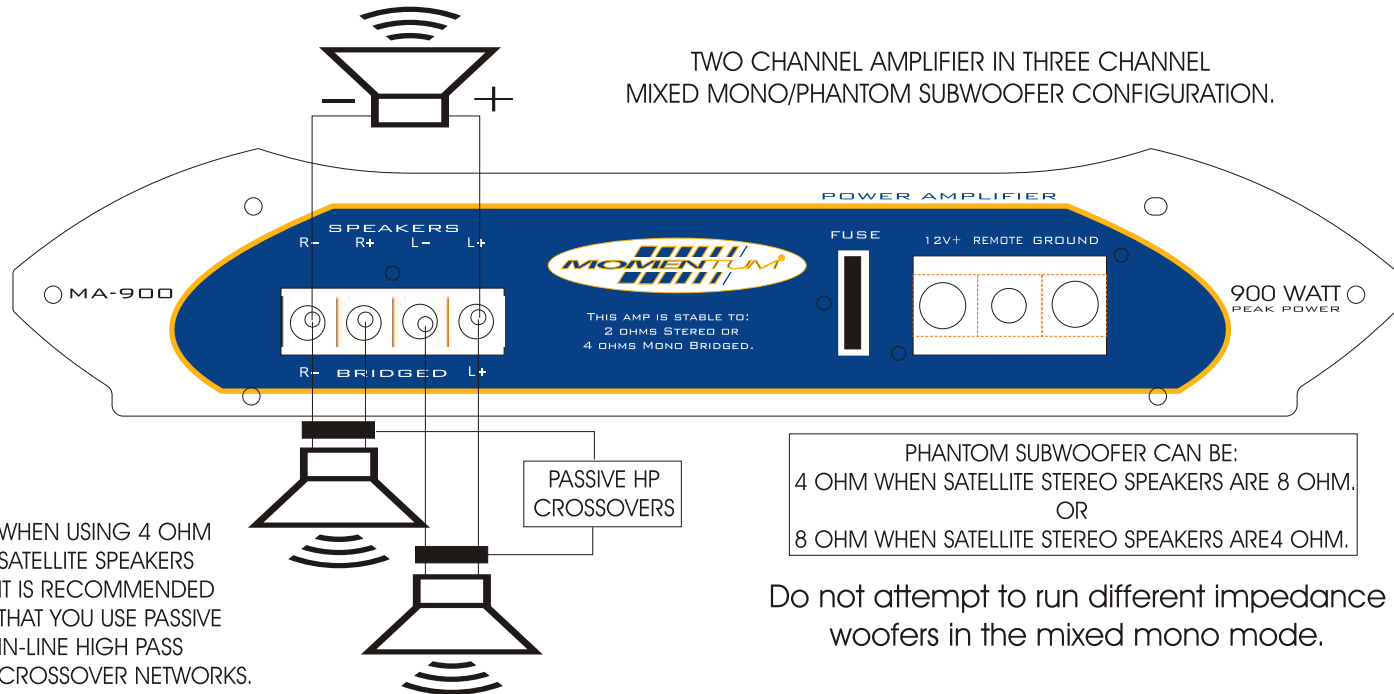
RCA Line Level Input

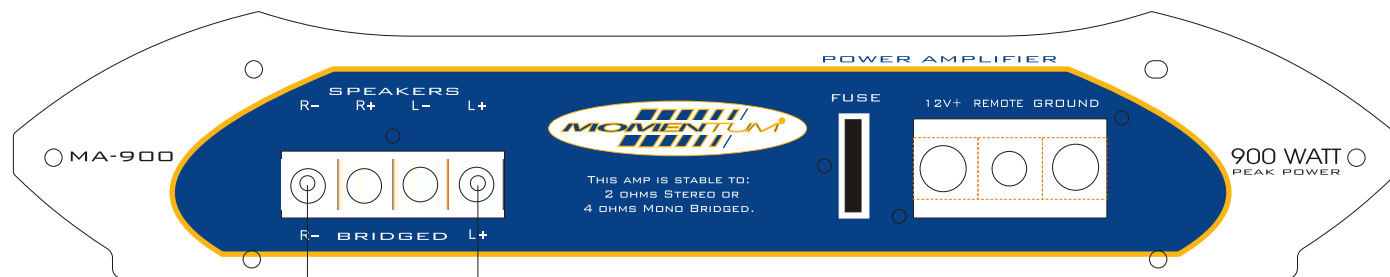






TWO CHANNEL AMPLIFIER IN THREE CHANNEL  
MIXED MONO/PHANTOM SUBWOOFER CONFIGURATION.

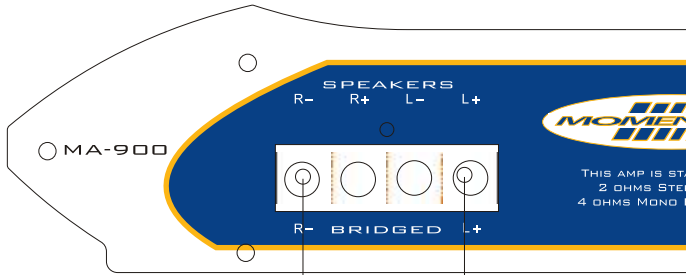




ONE CHANNEL MONO  
BRIDGED SPEAKER.

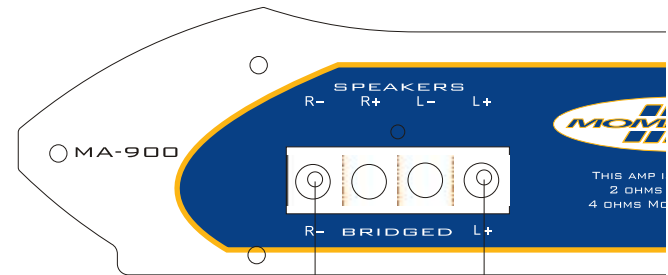
MINIMUM BRIDGED SPEAKER IMPEDANCE =  
4 OHMS. DO NOT ATTEMPT TO BRIDGE THE  
AMPLIFIER TO AN IMPEDANCE LOAD  
BELOW 4 OHMS.



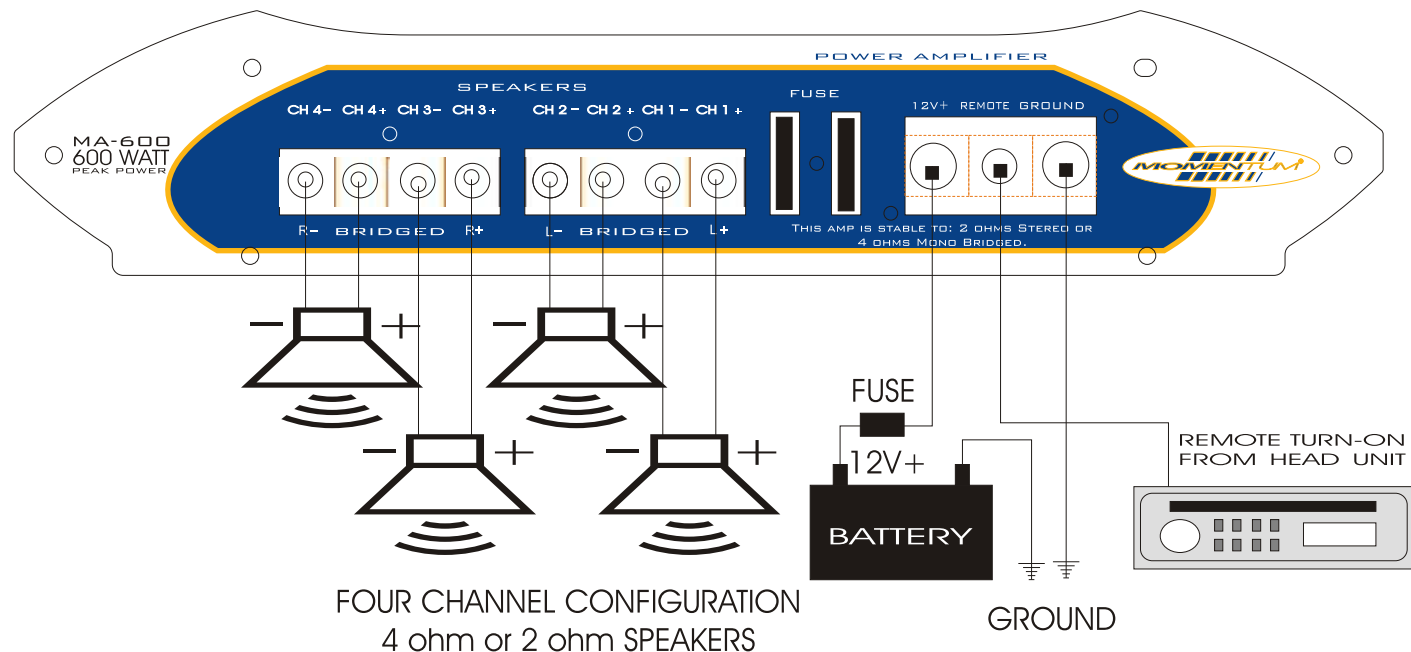


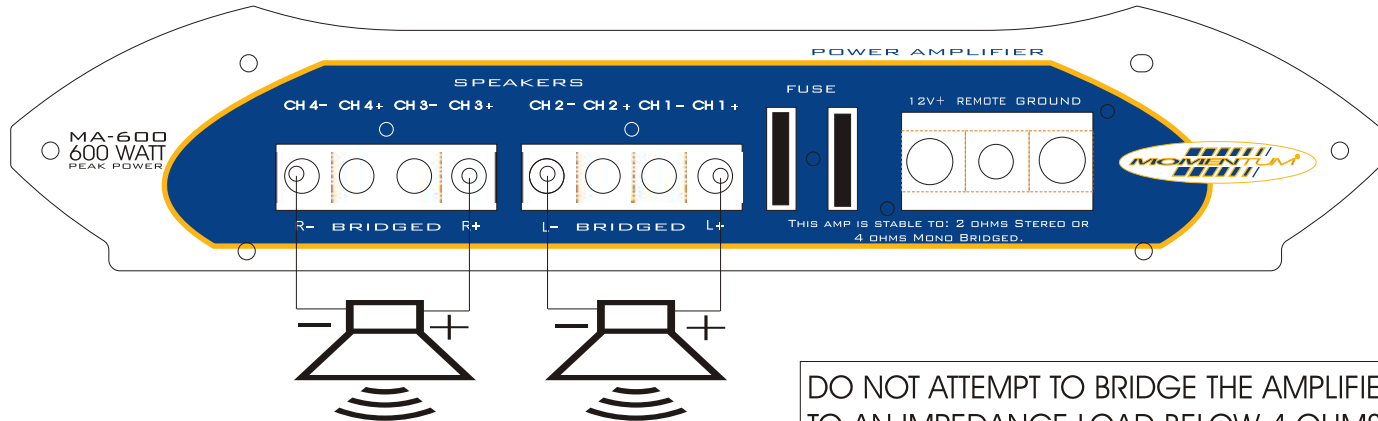
TWO 2 OHM WOOFERS WIRED IN SERIES  
TO A MONO BRIDGED 4 OHM LOAD.

DO NOT ATTEMPT TO BRIDGE THE AMPLIFIER  
TO AN IMPEDANCE LOAD BELOW 4 OHMS.  
DO NOT WIRE 4 OHM WOOFERS IN PARALLEL



TWO 8 OHM WOOFERS WIRED IN PARALLEL  
TO A MONO BRIDGED 4 OHM LOAD.

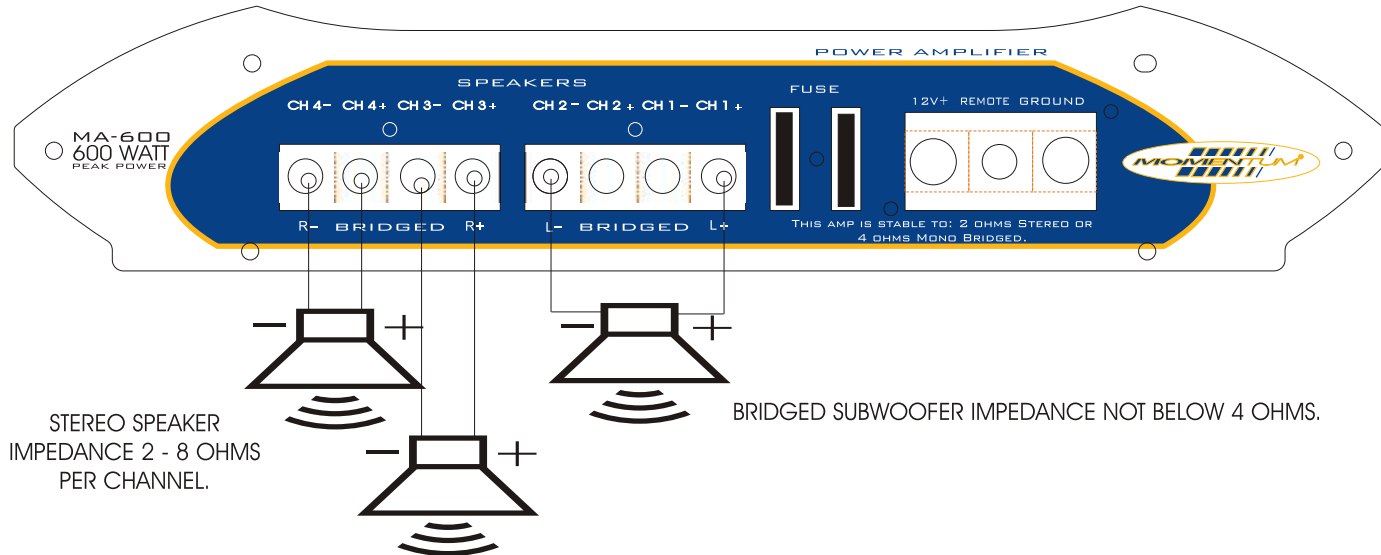




FOUR CHANNEL AMPLIFIER BRIDGED  
TO 2 CHANNEL. EACH BRIDGED CHANNEL  
SHOULD NOT BE BELOW A 4 OHM LOAD.



## FOUR CHANNEL AMPLIFIER IN THREE CHANNEL MODE.





### ADJUSTING YOUR SYSTEM.

When installing the system, you can not use both the RCA inputs and the High Level Speaker inputs at the same time. You must choose one method or the other. Never run your RCA cables on the same side of the vehicle as your power and ground wires. This will help avoid any electrical noise from getting into your system. It is recommended that you use high quality, shielded RCA cables.

To properly set your amplifier level control, turn the amplifier level control to 5 volts (minimum) and your head unit to maximum volume. Begin to turn the amplifier gain towards 150mV until you hear the music begin to distort. At that point turn the gain back a drop towards 5 volts and your system is set. The amplifier gain/level setting is not a volume control-it is a sophisticated circuit meant to match the preamp voltage of your signal source to the amplifier preamp circuit. Setting the amp gain to maximum when not necessary-will increase the chance of noise and distortion entering your system.

### SETTING YOUR CROSSOVER

It is important to remember not to set the Low Pass crossover below the roll off frequency of your subwoofer box. For example, if your box rolls off at 60Hz, don't set the LP crossover to 45Hz, typically you should set the crossover one full octave above the roll off frequency. LP=LOW PASS, this allows only low bass frequencies to be played and filters out all high frequencies from the subwoofer. HP=High Pass, this allows only high frequencies to be played and filters out all low frequencies from reaching typically smaller midranges and tweeters which can be damaged from powerful low frequency signals. HP=HIGH PASS, this means that the amplifier is playing in the full range mode without any frequencies being filtered.

The Bass Boost Circuit will add 12dB of boost at 45Hz. Use this equalization processor to properly tailor the bass to your in car response. Please be sure that your speakers can handle the increased 12dB of output before turning on the circuit. You may want to reduce the amplifier gain so that you do not bottom out your drivers when testing the Bass Boost circuit.



## TROUBLE SHOOTING GUIDE

Before you power up the system for the first time, please check that all your connections are tight and seated properly. Use a volt meter to check that all equipment is receiving 12Volts and that all grounds are good. Check to make sure that all switches and push buttons are in their proper position.

If the amplifier power LED does not light, disconnect all the speakers and RCA connections. Turn the amplifier on again. If the LED still does not light-make sure that the amp is getting power/ground and remote signal by testing these connections with a volt meter.

If the power LED does light, then reconnect the RCA cables one at a time. If the Diagnostic LED goes on at this point-then you know there is either a short in the RCA cable or the head unit is sending DC voltage into the amplifier. If the power LED stays on at the Diagnostic LED does not light, begin to reinstall the speakers-one at a time. If the Diagnostic LED lights when installing a particular speaker-that particular speaker must be shorted or the speaker wire may be shorted, replace the speaker and/or the wire.

Diagnosing Noise in your system can be tricky, first thing to do is to disconnect the RCA cables, if there is still noise-make sure your ground connection is to a real ground location of the vehicle. If the noise stops when you disconnect the RCA cables that means that the noise is originating from a source other than the amplifier. Possible reasons could include a ground loop, or badly ground head unit, equalizer or electronic crossover. Faulty alternator, old car battery, worn ignition wires, or bad power connection at the battery and/or alternator.



# Specifications

## MMA 300

2 x 100 Watts @ 4 ohm Stereo  
2 x 150 Watts @ 2 ohm Stereo  
1 x 300 Watts @ 4 ohm Mono Bridged.  
Dynamic Power (IHF-202 Standard)

## MMA 500

2 x 150 Watts @ 4 ohm Stereo  
2 x 250 Watts @ 2 ohm Stereo  
1 x 500 Watts @ 4 ohm Mono Bridged.  
Dynamic Power (IHF-202 Standard)

## MMA 900

2 x 300 Watts @ 4 ohm Stereo  
2 x 450 Watts @ 2 ohm Stereo  
1 x 900 Watts @ 4 ohm Mono Bridged.  
Dynamic Power (IHF-202 Standard)

## MMA 600

4 x 100 Watts @ 4 ohm Stereo  
4 x 150 Watts @ 2 ohm Stereo  
2 x 300 Watts @ 4 ohm Mono Bridged.  
Dynamic Power (IHF-202 Standard)

FREQUENCY RESPONSE: 20Hz - 30KHz

INPUT SENSITIVITY: 5Volt to 150mV

MINIMUM THD: <0.05%@ 1KHz 4 ohm

S/N RATIO: > 100dB

DAMPING FACTOR: > 200 @ 100Hz

SLEW RATE: 50v/ms

Due to constant product improvements,  
specifications are subject to change  
without notice. Copyright Momentum 2000.

